Physics 334, Summer Quarter 2013
Electric Circuits Laboratory I
Course Information
courses.washington.edu/phys334

Instructor: Prof. Oscar E. Vilches
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Office: Physics & Astronomy Building (PAB), room B424
Office Hours: Tuesdays and Thursday, 12-1 pm at PAB B424, or by appointment

Teaching Assistants:

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Lab Technical Supervisor: Jason Alferness, B256B, 221-2974
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Text books:
P.Horowitz and W.Hill, The Art of Electronics, 2nd edition.
T.Hayes and P.Horowitz, Student Manual for the Art of Electronics
There are copies of the text books for viewing in the lab.

Meeting times and locations:

Lectures: Physics & Astronomy Building (PAA), room A110
Tuesdays and Thursdays 10:50-11:50am
Note: The first lecture is Tuesday, June 25

Labs: Physics & Astronomy Building (PAB), room B280
Section AA (TA: S. Kasirga): Tuesday 1:00-4:20pm
Section AB (TA: B. Robinson): Wednesday 1:00-4:20pm

Note: Labs start July 2 (AA) or July 3 (AB)

A note on course enrollment: The class is almost full. If you'd like to enroll or change lab section, come to lectures the first week and talk

to the instructor. We will assess then what the actual enrollment situation is, perhaps some students may be willing to trade lab section.

Homework: Problems are assigned most weeks and are due on Tuesday by 2:30 pm the following week. Turn in the homework during lecture or Tuesday afternoon lab, a box will be available. Not all problems will be graded. Late homework gets zero points.

Exams: There are two one-hour exams, one on Thursday, July 25, and the other one on Thursday, August 22 (last day of class for this course) during the lecture time. There are no make-up exams.

Labs: There are eight labs in the course. **You must complete the eight labs, submit the report for them, and have it graded to receive a passing grade in this class.** The labs are a mix of exercises from the lab-manual, textbook and lab handouts; the lab handouts are on the course web site. You can complete labs in another section with prior approval of instructors. If you complete a lab in another section, you are responsible for getting your lab report to your TA for grading the day after lab; this does not happen automatically. **IMPORTANT**: In summer quarter there is no make-up week. Thus, it is extremely important that you attend all labs on time. If for some reason you can not attend on Tuesday (Wednesday), plan to attend the Wednesday (Tuesday) lab session. If this does not work out, plan to attend Tuesday and Wednesday labs the following week. There is only one extra make-up station in the lab (three people maximum!). Exams assume that everyone is up to date, so make sure you have done all the labs prior to exams.

Lab reports: You'll turn in lab reports at the end of each lab. You don't need a lab notebook. Use cross-ruled engineering paper so you can make careful graphs and sketches. Begin each report with your name and date of the lab. Subdivide the report into sections corresponding to assigned sections in the lab manual or notes, e.g. 1-1, 1-3. Each circuit must have a neat, readable schematic in your report; see Horowitz and Hill appendix E for information on what constitutes a readable schematic. Record your calculations, make graphs and sketches of oscilloscope traces as needed, and answer questions in the lab handouts and lab manual. Don't make the report

unnecessarily long: keep it short, concise but complete. Neatness and clarity certainly counts. You'll have to turn in reports and get a passing grade for all the labs to pass the course.

Grading:
Note on labs: You'll need to turn in lab reports for all 8 labs and pass them all to pass the course. Remember: You can make up only one lab in any week of class. One corollary: If you're missing two labs entering the last week of class, you will have failed the course*; see the section above "Labs" for more information*. If you completed a lab in a different section, it's your responsibility to ensure you get your lab report to your regular TA for grading the day after you complete that lab.

Assuming requirement above is fulfilled, the final grade will be computed by using each component of the course approximately with the following percentages:

Exam 1: 15%
Exam 2: 20%
Homework: 15%
Lab practice (assessed by your TA): 10%
Lab reports: 40%
The mean grade in the class has been around 3.1

Web site: The web site courses.washington.edu/phys334 contains more information, including comments on the organization of the lab, tips on using the lab breadboards, sample exams and solutions, and specific handouts for each of the eight labs.

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[June 2013]